

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006295**Date Inspected:** 16-Apr-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Li Lin, Mr. Dong Liang Jin

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP421-001, DP259-001, DP150-001, DP227-001, DP169-001, DP119-001, DP174-001 and DP335-001.

OBG Bay 3

This QA Inspector performed random ultrasonic inspections of OBG Floor Beam welds FB003-137-104, FB003-141-105, FB003-146-105, FB003-147-104, FB003-147-105 and FB003-154-104. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report. ZPMC

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ultrasonic Inspectors have ultrasonically rejected welds FB003-133-104, FB033-133-105, FB003-137-105, FB003-139-104, FB003-139-105, FB003-141-104 and FB003-154-105.

Tower Bay 10 and 11

The QA Inspector observed ZPMC welder Ms. Den Jun Feng stencil 202756 is using welding procedure specification WPS-B-T-2221-B-U3-C-S-2 to make submerged arc groove weld WSD1-FBSA3-2A/C-9A-2. The QA Inspector observed ZPMC Quality Control personnel monitoring this welding and the QA Inspector observed ZPMC Quality Control personnel had measured a welding current of approximately 650 amps, 32 volts and a welding speed of 530 mm per minute. ZPMC has installed electrical heaters on the back side of this weld in order to maintain base material preheat. Items observed by the QA Inspector appear to comply with project specifications.

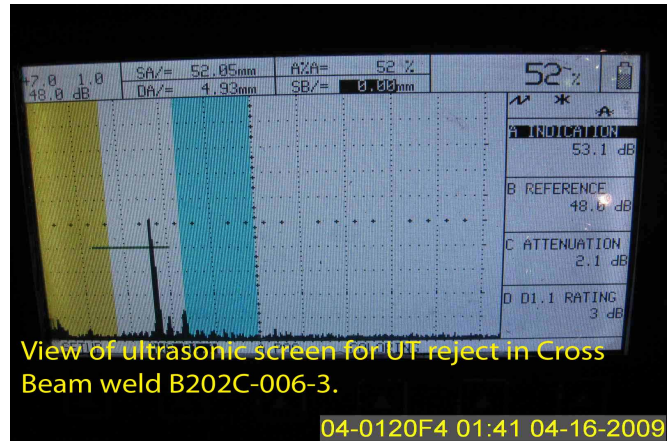
The QA Inspector observed ZPMC welder Mr. Shi Jiabao, stencil 068494 is using welding procedure WPS-B-P-2332-TC-P5-F to make flux cored fillet tack welds on tower stiffener to skin plate weld ESD1-FBSA3-2/A/C-38. The QA Inspector observed ZPMC QC Personnel have measured a welding current of 315 amps, 31.2 volts and a travel speed of 308 mm per minute. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Zhao Jin Long, stencil 069894 is using welding procedure WPS-B-P-2312-TC-P5 to make shielded metal arc weld fillet tack welds on tower stiffener to skin plate weld ESD1-FASA 3-2B/C-49b. The QA Inspector measured a welding current of approximately 165 amps and the QA Inspector observed the base material had been preheated with a torch where the tack welds were to be made. The QA Inspector observed ZPMC QC Inspector Mr. Xhao Hai Lang monitoring this welding. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Liu Shouhai, stencil 066456 is using welding procedure WPS-B-P-2312-TC-P5 to make shielded metal arc weld fillet tack welds on tower stiffener to skin plate weld ESD1-FASA 3-2B/C-49a. The QA Inspector measured a welding current of approximately 165 amps and the QA Inspector observed the base material had been preheated with a torch where the tack welds were to be made. The QA Inspector observed ZPMC QC Inspector Mr. Xhao Hai Lang monitoring this welding. Items observed by the QA Inspector appear to comply with project specifications.

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Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By: Dawson,Paul

Reviewed By: Clifford,William

Quality Assurance Inspector

QA Reviewer